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ABSTRACT

A study investigated the labor market transition of youths over the first 8-14 postschooling years using the 1992 National Longitudinal Survey of Youth. Its primary objective was to develop an understanding of youth labor markets by examining the effects of training and early labor market experiences on economic well-being over a long span of time. Analysis showed that private sector training was rather uncommon among youth during the years immediately following secondary schooling and especially so for high school dropouts. Little conclusive evidence showed that such training during the few years immediately following school conferred lasting labor market benefits as measured by earnings and unemployment experiences several years later. Data did not point to a clear answer as to the determinants of who received training and who did not during those early years. The majority of youth found their first job within 6 months of leaving school, but many of them tended either to quit or to be fired within 3 years of leaving school. Early turnover experiences, along with the time needed to find the first full-time job, appeared to have some impact on later earnings and unemployment experiences. Gender, race, and ability were important determinants of labor market performance. The implication of findings for Ohio youth was that absence of a structured transition from school to work was of concern in Ohio. (Contains 13 references and 13 data tables.) (YLB)

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LABOR MARKET PERFORMANCE OF NON-COLLEGE-BOUND YOUTHS

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ABSTRACT

This paper investigates the labor market transition of youths over the first eight to fourteen post-schooling years using the 1992 National Longitudinal Survey of Youth. The recent report by the *MIT Commission on Industrial Productivity* laments the lack of a structured transition between secondary schools and work in the United States. This absence of structure places American workers at a serious competitive disadvantage. Our primary objective is to develop a comprehensive understanding of youth labor markets by (1) focusing on the effects of training and early labor market experiences on economic well-being and (2) examining these effects over a long span of time. Our analysis indeed show that private sector training is rather uncommon among U.S. youths during the years immediately following secondary schooling -- and especially so for high-school dropouts. Furthermore, although some youths do manage to receive training during the few years immediately following school, we find little conclusive evidence that such training confers lasting labor market benefits, as measured by earnings and unemployment experiences several years later. The underlying data do not point to a clear answer as to the determinants of who receives training and who does not during those early years. The majority of youths are finding their first full-time job within six months of leaving school, but many of them tend either to quit or to be fired within three years of leaving school. Early turnover experiences, along with the time needed to find the first full-time job, do appear to have some impact on later earnings and unemployment experiences. We find that gender, race and ability are important determinants of labor market performance. As for the implications of these findings for Ohio youths, the absence of a structured transition from school to work is of concern in Ohio, where the economy has undergone fundamental structural changes over the past fifteen years. The emergence of Japanese-style production and operating methods and the growth of high technology and service industries means that new hires fresh out of school will increasingly be trained in the private sector. For this training to be effective, however, new hires must be ready for private sector training, and employers must be able to count on trained workers --and, indeed, on trainees themselves-- to stay with their companies for some time. In this regard, the tendency for high turnover among youths is worrisome.

LABOR MARKET PERFORMANCE OF NON-COLLEGE-BOUND YOUTHS

Masanori Hashimoto and Ross A. Miller
(Final Report: July, 1995)

Introduction

This paper investigates the labor market transition of non-college-bound youths over the first eight to fourteen post-schooling years.* The recent report by the *MIT Commission on Industrial Productivity* laments the lack of a structured transition between secondary schools and work in the United States. This absence of structure places American workers at a serious competitive disadvantage (Dertouzos *et. al.* 1989). In the United States, those with a high school education or less constitute the modal group in the young adult population: in 1987, for example, they made up almost 50 percent of the population aged 25 to 34 years (*Statistical Abstract of the United States 1992*, Table 223). An increased understanding of the transition from school to work is essential in seeking the effective deployment of this large labor group.

The lack of schooling beyond the secondary level need not impair the productivity of American youths so long as job training is accessible. Their German counterparts routinely receive training via the celebrated apprenticeship programs while in Japan youths undergo intensive employment-based training. The *MIT Commission* argues that in the United States there is little institutional structure to guide youths through the transition

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from school to work. As a result, non-college-bound youths are often unskilled for life. This phenomenon is of current social concern: over the past 15 years the demand for less educated workers has fallen relative to the demand for others. The result has been a widening of the wage inequality between high school and college graduates and an increase in the incidence of unemployment and non-labor-force participation among high-school graduates (Murphy and Welch 1993a, 1993b, Topel 1993). It is worth noting that the decline in employment opportunities for youths has been associated with such deviant behaviors as crime, drug use, violence in school, and even suicide (Freeman and Wise 1982, Hashimoto 1987).

Bleak as the overall prospects may appear, these youths' experiences are actually quite diverse. Some manage to establish successful careers, albeit at varied paces, while many others endure a series of job changes without any discernible improvements in their earnings potential. Many eventually receive various types of training--company training being the most common (Lynch 1992). A tabulation of the *National Longitudinal Survey of Youths* (*NLSY*) indicates that 33.5 percent of high school graduates aged 21-29 years in 1986 received some type of training, with 19.4 percent receiving company training (Veum 1993). How and why do some non-college-bound youths succeed in finding jobs that offer training opportunities during the early years of work experience while others fail? What are the effects of such training on labor market outcomes?

Our objective is to develop a more comprehensive understanding of the school-to-work transition than exists at present by (1) focusing on the effects that various early labor market experiences, including training, have on economic outcomes in later years and by (2) examining these effects over a longer span of time than has previously been possible.

We accomplish the latter of these objectives by making use of the 1992 release of the *NLSY*, the first in which many of the initial respondents have accumulated 10 or more years of labor market experience. The early labor market experiences in which we are most interested include the frequency of job changes, the reasons for these job changes (e.g., quits vs. layoffs), unemployment experiences, and the time needed to obtain full-time jobs. Economic well-being in later years is measured by the levels and growth rates of earnings and by the incidences of unemployment. By developing an understanding of how the incidence and type of training impact the long term economic well-being of non-college-bound youths, we hope to offer a useful basis for informed policy discussions on the steps needed to upgrade the training and skills of American workers.

State of Knowledge

Many previous studies have analyzed youth labor market problems (*e.g.*, Freeman and Wise 1982, Hashimoto 1982 and 1987, Freeman and Holzer 1986, Altonji and Spletzer 1991, Wolpin 1992, Lynch 1992). The studies by Wolpin and Lynch are the most relevant to our project. They use the same data set, although their studies cover fewer years, and address labor market transition issues (Wolpin) and the effects of training (Lynch). The Altonji-Spletzer study is also of interest given that it too analyzes training issues. Given limitations on space, we discuss only these three, most directly relevant, studies.

Altonji and Spletzer use the *National Longitudinal Survey of the High School Class of 1972* to examine the relationship between the receipt of training and worker and job characteristics. They find (1) that the incidence of training is slightly higher for

women than for men, (2) that the amount of training is larger for men, (3) that blacks receive somewhat more training than whites after controlling for related variables, and (4) that both post-secondary education and aptitude have positive effects on training. They also find that the incidence of training varies with the verbal, math, and clerical skill requirements of different occupations. They do not investigate the effects of training on the economic well-being of the recipients.

Lynch uses the *National Longitudinal Survey of Youth (NLSY)* to examine the effects of various types of training on the wages of non-college graduates. Her major findings are summarized as follows: (1) Race and gender are the primary variables influencing the probability of receiving training; (2) training does increase wages, with the effects varying by training types; and (3) off-the-job training by various institutions has the largest impact on wages. Her study uses data covering a rather short period (1980 through 1983); as such, her findings pertain only to the very short-term, almost contemporaneous, wage effects of training. Short-term effects understate the true effectiveness of various types of training. For example, an economic model of human capital predicts that company training confers benefits in the form of job security and steady wage growth rather than in the form of an immediate wage boost. We are able to use data for the years 1980 through 1992 to develop a more comprehensive understanding of the long-term effectiveness of various types of training.

Wolpin uses the *NLSY* to study the school-to-work transition over the first five post-schooling years. In particular, he asks if the early work history of high school graduates, as measured by the number of weeks of work after leaving school, affects both the likelihood of a job offer as well as the size of the concomitant wage offer. He finds

that work history indeed has significant positive effects and that the effects for whites are much larger than those for blacks. In addition, in the early 1980s, he finds that the majority of high-school graduates did obtain full-time employment within the first year after leaving school. Although the proportion of whites was higher than that of blacks (80 percent vs. 60 percent), a non-negligible proportion of both sets of graduates evidently spent more than two years without a full-time job (10 percent of whites and 25 percent of blacks).

Data and Selected Sample Characteristics

The sample used for this study is taken from the 1992 release of the *National Longitudinal Survey of Youth (NLSY)*. The *NLSY* is a longitudinal survey of 12,686 people who were between the ages of 14 and 21 in 1979. Because most of the survey respondents were still enrolled in school at the time of the first interview, it is possible to construct a complete labor market history for a majority of the panel. Although our main interest is in non-college bound youths, we include analyses of data for college graduates as well for comparison.

Because we are investigating the impact of an individual's labor market experience immediately following school on later labor market success, it is important to establish when an individual is considered to have left school. The survey asks respondents each year whether (a) they have "attended or been enrolled in regular school" at any time since the date they were last interviewed; if they answer "yes", it goes on to ask (b) if they are currently enrolled in regular school. If the answer to either question is no, the survey records the month and year that the respondent was last enrolled in school as the initial

separation date. A full labor market history is not available for all respondents to the *NLSY*. In particular, for those respondents who left school prior to January of 1978, no job information is collected for jobs starting prior to this date. These individuals are dropped from our sample, leaving a data set containing 9,271 respondents.

Of the 9,271 individuals in this data set, only 2,672 are included in the 1992 wage regression. There are several distinct reasons accounting for the difference. First, 1,252 respondents were enrolled in school in every survey year between 1979 and 1984. Because we are ultimately interested in the labor market success of non-college-bound workers and because we wish to restrict the sample to those respondents who were at least age 19 by 1984, these individuals were not matched up with job information from their first few jobs after school. Second, of those remaining, 1,961 were not interviewed in 1992. Third, of the 6,058 remaining, 1,188 had not had a "current or most recent job" during the previous year, leaving 4,870. The remaining difference between this and the 2,672 is attributable to missing explanatory variables.

Our measures of labor market success are fairly self-explanatory. For the recent survey years of 1990, 1991, and 1992, we have run regressions to explain the log of the wage for that year (*lwage*), the number of unemployment spells experienced since the last interview (*numsplls*), and the percentage of weeks unemployed since the last interview (*wksump*). Tables 1 through 7 highlight the major characteristics of the sample used in the 1992 analysis.

Table 1 shows demographic and other selected characteristics of the sample, broken down by years of education completed as of 1992. Overall, 55 percent of the sample are male while 45 percent are female. The male proportion is large relative to the

female proportion for non-high school graduates (75 percent vs. 25 percent); however, this gender difference is reversed for college graduates (45 percent vs. 55 percent). As expected, the proportions of blacks and Hispanics in the sample generally fall when going from non-high school graduates to college graduates. The sample proportion for married individuals rises with the level of education completed. Not surprisingly, the sample is dominated by terminal high-school graduates--almost 66 percent for males (959 out of 1,461 individuals) and 70 percent for females (844 out of 1,211 individuals).

Our investigation of the determinants of labor market outcomes focuses upon the effects of a number of variables from a worker's early labor market experiences. Specifically, we consider not only the number of times a worker quit (or was fired from) a job but also the amount of training he received during his early experiences. We also look at the amount of time that elapsed between the initial separation date from school and the acquisition of the first full-time job. Tables 2 through 4 summarize the data on some of these issues. Table 2 shows the number of times the included respondents were fired from a job during the first 36 months after leaving school; Table 3 shows the number of times they quit a job for family reasons; and Table 4 shows the number of times they quit a job for other reasons. All three tables give a breakdown by number of years of schooling completed.

According to Table 2, being fired during the first 36 months after leaving school is not a common experience, especially for individuals with higher levels of educational attainment. Table 3 indicates that quitting for family reasons is also uncommon over the first three years after leaving school, again especially for those with higher levels of educational attainment. Table 4 does show, however, that quitting for non-family reasons

during the first three years after leaving school is rather common, both for terminal high school graduates and for their more educated cohorts. This phenomenon is consistent with the accepted notion that young workers tend to job shop in the early years of labor force experience. Note that quitting a job once seems more common, but quitting more than once seems less common, for those with higher educational levels.

An important factor in the transition from school to work is job training. Many researchers have recognized its importance and have attempted to assess its impact on economic well-being. Tables 5a through 5d summarize training experiences over the first 36 months after leaving school. Following Lynch (1992), we organize the various types of training tracked by the *NLSY* into one of three categories: (a) apprenticeships; (b) on-the-job (or company) training; and (c) other training. In addition to tracking the types of training received, the *NLSY* records both the number of weeks of training over the year and the number of hours of training per week. In these tables, the variable *Apprenticeship* is the number of (distinct) apprenticeships the respondent held during the first 36 months after leaving school; *Company Train* is the number of distinct spells of company training; and *Others* is the number of spells of other types of training over the first 36 months, including training received via business colleges, nursing programs, voc-tech training schools, barber-beauty schools, and correspondence courses.

According to Table 5a, training, especially apprenticeships, is rare during the first three years following the initial separation date. Table 5b suggests that apprenticeship is especially rare for college graduates. In Table 5c, we see that company training is more common for individuals with higher levels of educational attainment, suggesting that company training is complementary to formal education. Table 5d shows that high-school

graduates are the most likely to have received some other form of training, with high-school dropouts and college graduates experiencing a similar incidence. These tables indicate a lower incidence of training than reported by Veum (1993). Veum's tabulations are for training received from 1986 to 1991 whereas ours are for training received only over the 36 months after a respondent had first left school. Our tabulations indicate that training is rather uncommon during the years immediately following secondary schooling (and especially so for high-school dropouts), underscoring the concern that American youths lack a structured transition between secondary schools and work.

In order to compare the effects of training with those of returning to a formal schooling situation, we have identified those individuals who returned to school following their initial separation date. The variable, *skldiff*, measures the difference between the number of years of schooling completed as of the 1992 interview and the number of years of schooling completed at the time the respondent first left school. The values of *skldiff* are reported in Table 6. Clearly, the majority of the individuals in the sample did not obtain any additional schooling after their initial separation. Note, however, the positive relationship between the early acquisition of additional schooling and the initial level of educational attainment.

Finally, Table 7 shows the number of months needed after leaving school to obtain the first full-time job. Slightly more than half of those in the sample (54 percent) found their first full-time job within one to three months after leaving school; this proportion increases with the level of schooling accumulated prior to entry into the labor force.

Regression Analysis

Tables 8 through 10 report the results of our regression analyses of 1992 labor market outcomes. Regression results for 1990 and 1991, which are similar to those obtained for 1992, are not reported here but are available upon request. These regressions are intended to document the effects of early labor market experiences on economic status some ten years later. The regressions are reported separately for high-school dropouts, high-school graduates, and college graduates.

We consider the following explanatory variables: *Hisp.*, *Black*, *male*, *married*, *H.S. Grad*, *Coll. Grad.*, and *union* are all dummy variables; *school* is the number of years of schooling completed through the relevant year; *tenure* is the weeks of tenure on the job whose wage is the dependent variable; *tenure sq.* is tenure squared; *numfrs* is the number of jobs fired from during the first three years after school; *otquit* is the number of jobs quit for non-family reasons during the first three years after school; *fmquit* is the number of jobs quit for family reasons during the first three years after school; *wks-appren* is the number of weeks of apprenticeships training received during the first three years after school; *wks-cotran* is the number of weeks of company training during the first three years after school; *wks-ottran* is the number of weeks of other types of training during this period; *job1mos* is the number of months which elapsed between the initial separation date and the acquisition of the first full-time job; *skldiff* is the difference between the number of years of schooling completed in 1992 (or 1991) and the number completed at the time the respondent first left school; and *AFQT* is the score on the Armed Forces Qualifying Test (AFQT) administered to virtually all *NLSY* respondents in 1981.

As indicated by Table 8, Hispanics were paid more than whites across educational groupings, although the statistical significance is low. Black high-school dropouts (statistically insignificant) and high-school graduates (statistically significant) earned less than their white counterparts; however, we find no indication that black college graduates earned less than whites. The gender coefficients are all highly statistically significant. Males earned more than females, although the difference in the nominal coefficient narrows with educational attainment. Marital status and years of schooling obtain positive, though mostly insignificant, coefficients. Years of schooling (*school*) may be insignificant due to the small variation in this variable within each educational attainment group. Tenure has statistically significant positive effects on the wages of non-college graduates, with its nominal coefficient decreasing with the educational level. For college graduates, tenure also yields positive effects but with low statistical significance. If one was a union member in 1992, he earned more than others, although the nominal coefficient is smaller and less significant for college graduates, indicating that union rents tend to accrue to workers with lower levels of education.

Turning to the effects of turnover on later earnings, a dismissal from a job (*numfrs*) has a negative, and statistically significant, effect on the wages of high-school graduates. Interestingly, for college graduates, this coefficient is nominally larger than it is for non-college graduates, suggesting that for higher skill jobs the experience of being fired has more serious consequences for wages in later years. Quitting for non-family reasons (*otquit*) has positive and significant effects on the wages of non-college graduates but negative and insignificant effects on the wages of college graduates. The primary reason for this divergence in the effects of *otquit* among the educational groups may lie in job

shopping, which appears to be particularly productive for non-college bound youths. Quitting for family reasons (*fmquit*) evidently has adverse effects on the later earnings of high-school and college graduates but positive and insignificant effects on those of high-school dropouts. Both the statistical significance and the magnitude of the adverse effects of *fmquit* are larger for college than for high-school graduates, suggesting that an interruption of a career for family reasons adversely affects the subsequent earnings of college graduates.

The training coefficients are puzzling. One would expect training experience to have positive effects on later earnings. Here, the only positive and statistically significant coefficient is associated with *wks-cotran* for high-school dropouts. Moreover, both *wks-appren* and *wks-cotran* obtain counter-intuitive negative (and statistically significant) coefficients for high-school graduates.

The results for additional schooling (*skldiff*) show a negative coefficient for college graduates; as of 1992, those who completed college only after taking a break in their schooling had not caught up with those college graduates who had continuously stayed in the labor market. As expected, the time required to find the first full-time job has negative effects on the wages of all groups, but only the coefficient for high-school graduates is statistically significant. Finally, we attempt to control for differences in ability by using the score on the AFQT administered to (virtually) all *NLSY* respondents in 1981. This variable obtains statistically significant positive coefficients for all three groups. Judging by the *t*-values, this is one of the most important variables in explaining 1992 wage differences.

The findings reported in Table 8 indicate that early labor market turnover -- being fired, quitting, and the time required to locate the first full-time job -- impacts later earnings. The effects of training experiences on later earnings are ambiguous. Ability, as measured by *AFQT*, and gender are the two most important determinants of 1992 earnings across the three educational groups. Regression analyses of earnings in 1990 and 1991 produce similar results. (The tables are not included here to conserve space).

Turning to unemployment experiences, Tables 9 and 10 respectively report the results of the regression analyses for unemployment spells and for the proportion of time spent unemployed in 1992. According to Table 9, blacks with less than a college degree experienced more, but blacks with a college degree experienced less, unemployment than whites. These findings are statistically significant. Males appear to have experienced less unemployment, although a significant coefficient was obtained only for college graduates. For high-school dropouts, being married meant fewer unemployment spells. A similar tendency is observed for high-school and college graduates, but only with low statistical significance. Being a union member clearly meant fewer unemployment spells for high-school graduates, but for other groups there are no discernible union effects.

Judging by the statistical significance of the coefficients, early turnover experiences affected the incidence of unemployment experienced by high-school graduates to a greater degree than other educational groups. In particular, frequent dismissals and quits (for any reason) in the first three years after leaving school meant more unemployment in 1992. Perhaps, these variables are capturing some unobserved heterogeneity among youths: those who were prone to turnover early on possessed some characteristic(s) that in 1992 continued to make them susceptible to spells of unemployment. The training variables are

all insignificant. Surprisingly for high-school graduates, acquiring additional years of schooling (*skldiff*) led to more, not fewer, spells of unemployment. This finding may reflect the fact that in 1992 those who had obtained additional schooling were by definition relatively inexperienced in the labor market. If a youth took a longer time to find his first full-time job, he experienced more spells of unemployment in 1992, although this result is significant for only high-school dropouts. Finally, a high aptitude reduced the incidence of unemployment experienced by high-school graduates.

Table 10 reports our findings with respect to the proportion of time spent in unemployment since the last interview. The dependent variable here is the percentage of weeks spent in unemployment between the 1992 interview and the previous interview. As with unemployment spells, black non-college graduates spent more time in unemployment than their white counterparts while black college graduates fared better than whites. Male high-school graduates spent more time in unemployment than their female counterparts. Because Table 9 reports fewer unemployment spells for these males, these findings together suggest that male high-school graduates were more prone to long-term unemployment than female high-school graduates. Being married meant less time spent in unemployment, with the statistical significance of this finding being high across the three groups. Years of schooling resulted in fewer weeks of unemployment for college graduates while union membership led to fewer weeks of unemployment for high-school graduates. With respect to early turnover experiences, the only statistically significant finding is the positive association between *numfrs* and weeks spent in unemployment in 1992. As with unemployment spells, training experiences appear to have had little discernible influence on the proportion of time spent in unemployment. Finally, aptitude is

negatively related to weeks of unemployment, with the coefficients obtained for high-school and college graduates being statistically significant.

Determinants of Early Labor Market Experiences

In this section, we attempt to increase our understanding of early labor market experiences. In particular, we attempt to explain the early labor market experience variables -- dismissals and quits (*numfrs, otquit, fmquit*), training (both incidence and duration), and the time to the first full-time job (*job1mos*) -- in terms of several independent variables.

The model is summarized as follows:

$$\mathbf{X} = F(\mathbf{Z}),$$

where the bold letters indicate vectors of variables. The above equation specifies the various early labor-market experience variables comprising **X** as functions of the various independent variables comprising **Z**. The early labor-market experience vector, **X**, contains dismissals and quits, the time to the first full-time job, and training. The explanatory vector, **Z**, consists of such standard correlates as gender, race, previous work experience, marital status, union status, the time elapsed before finding the current job, aptitude, and other individual characteristics. Aptitude, as measured here by AFQT scores, introduces a selectivity bias if employers choose to train and to pay their workers on the basis of this one criterion. The findings of Altonji and Spletzer were mixed as to the effects of aptitude/achievement variables (SAT math and verbal scores) on training incidence.

Findings

Tables 11 through 13 report our estimates of the relationship between early labor market experiences and the independent variables. Table 11 refers to early turnover experiences during the first 36 months after leaving school. Hispanics and blacks tended to experience fewer dismissals (*numfrs*) and quits for non-family reasons (*otquit*) but were not discernibly different from whites in quits for family-related reasons (*fmquit*). Judging by the coefficient on *male*, quits for family-related reasons were higher for females than for males, regardless of marital status. (See the finding corresponding to the below discussed marital status variable). Those with more years of schooling (*sklbreak*) experienced less turnover, regardless of the source under consideration, and those with a high school diploma (*H.S. Grad*) clearly experienced fewer dismissals.

The aptitude variable (*AFQT*) is evidently associated with more quits, perhaps because of the inclination of those with higher aptitude levels to shop for a good job match. Youths who started working within the year before leaving school (*prev. job*) experienced more dismissals and quits for non-family reasons. It is puzzling that union membership within 36 months of leaving school is associated with a greater incidence of quits for family-related reasons. Finally, being married in early years meant fewer dismissals and quits for non-family reasons but more quits for family reasons. The estimated coefficients for *married36* (0.1468) and *male* (-0.0920) together indicate that married females are more likely than unmarried males to have quit jobs, perhaps to start families. Surprisingly, these coefficients also imply that married males are more likely to have quit their jobs for family reasons than either unmarried males or females.

As indicated by the statistically significant coefficients in Table 12, males found their first full-time jobs more quickly than females. Also, those with greater years of schooling and higher aptitude levels found their first full-time jobs earlier than others. Finally, those who started working within one year before leaving school and those who entered military service within one month after leaving school (*milit1*) took longer to find their first full-time jobs.

Table 13 reports our regression analyses of the determinants of training. The findings are rather uninformative, with many of the estimated coefficients being statistically insignificant. Hispanics and blacks evidently received more apprenticeship training, but less company training, than others. Males received more weeks of apprenticeship and company training than females, although the company training result is not statistically significant. Educational background appears to have no relationship with training experiences. On the other hand, aptitude is positively associated with weeks of training, with the results for apprenticeship and other training being statistically significant. Union members received more weeks of apprenticeship training, although the statistical significance of the estimated coefficient is low.

There is an indication in Table 13 that gender and aptitude make a difference in the amount of training received, a finding which is consistent with the notion that employers select workers for training on the basis affirmative action and merit based criteria. The statistical significance of these findings is not high, however. Overall, the findings are inconclusive in supporting the proposition that personal attributes make a large difference in determining early training experiences.

Concluding Remarks

What do the above findings say about the school-to-work transition of American youths? Our tabulations indicate that private sector training is rather uncommon among U.S. youths during the years immediately following secondary schooling -- and especially so for high-school dropouts. This finding underscores the concern that American youths lack a structured transition between secondary schools and work. That training opportunities are apparently so scarce for high-school dropouts is of particular concern. Furthermore, although some youths do manage to receive training during the few years immediately following school, we find little conclusive evidence that such training confers lasting labor market benefits, as measured by earnings and unemployment experiences several years later. The underlying data do not point to a clear answer as to the determinants of who receives training and who does not during those early years.

The majority of youths are, indeed, finding their first full-time job within six months of leaving school, but many of them tend either to quit or to be fired within three years of leaving school. Early turnover experiences, along with the time needed to find the first full-time job, do appear to have some impact on later earnings and unemployment experiences. We find that gender, race and ability are important determinants of labor market performance.

As for the implications of these findings for Ohio youths, the absence of a structured transition from school to work is of concern in Ohio, where the economy has undergone fundamental structural changes over the past fifteen years. The emergence of Japanese-style production and operating methods and the growth of high technology and service industries means

that new hires fresh out of school will increasingly be trained in the private sector. For this training to be effective, however, new hires must be ready for private sector training, and employers must be able to count on trained workers --and, indeed, on trainees themselves-- to stay with their companies for some time. In this regard, the tendency for high turnover among youths is worrisome.

A major limitation of this study is that we do not take full account of individual heterogeneity. Although gender, race, and ability are included in our regressions, our resources did not permit a fuller investigation of how unobserved heterogeneity affects labor market outcomes.

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Table 1
Characteristics of the Sample
in 1992 Wage Regressions
by Educational Attainment

	H.S. Dropouts		H.S. Grads		College Grads		Total	
	N	% of Sample	N	% of Sample	N	% of Sample	N	% of Sample
Males	271	75.3	959	53.2	231	45.4	1461	54.7
Females	89	24.7	844	46.8	278	54.6	1211	45.3
Blacks	77	21.4	492	27.3	94	18.5	663	24.8
Hispanics	109	30.3	322	17.9	45	8.8	476	17.8
Other	174	48.3	989	54.9	370	72.7	1533	57.4
Married	154	42.8	988	54.8	328	64.4	1470	55.0
Union Members	52	14.4	333	18.5	61	12.0	446	16.7
Total	**360**	**100.0**	**1803**	**100.0**	**509**	**100.0**	**2672**	**100.0**

Source: National Longitudinal Survey of Youth

Table 2
Number of Times a Worker was Fired from a Job
During First 36 Months After School,
By Years of Schooling Completed

Frequency	H.S. Dropouts		H.S. Grads		College Grads	
	N	% of Sample	N	% of Sample	N	% of Sample
0	273	75.8	1563	86.7	485	95.3
1	63	17.5	190	10.5	23	4.5
2	19	5.3	41	2.3	1	0.2
3	3	0.8	4	0.2	0	0.0
4	2	0.6	4	0.2	0	0.0
5	0	0.0	1	0.1	0	0.0
Total	360	100.0	1803	100.0	509	100.0

Source: National Longitudinal Survey of Youth

Table 3
Number of Times a Worker Quit a Job for Family Reasons During First 36 Months After School, By Years of Schooling Completed

Frequency	H.S. Dropouts		H.S. Grads		College Grads	
	N	% of Sample	N	% of Sample	N	% of Sample
0	325	90.3	1673	92.8	487	95.7
1	29	8.1	112	6.2	19	3.7
2	6	1.7	14	0.8	3	0.6
3	0	0.0	3	0.2	0	0.0
4	0	0.0	1	0.1	0	0.0
5	0	0.0	0	0.0	0	0.0
Total	360	100.1	1803	100.1	509	100.0

Source: National Longitudinal Survey of Youth

Table 4
Number of Times a Worker Quit a Job for Non-Family Reasons During First 36 Months After School, By Years of Schooling Completed

Frequency	H.S. Dropouts		H.S. Grads		College Grads	
	N	% of Sample	N	% of Sample	N	% of Sample
0	84	23.3	371	20.6	116	22.8
1	92	25.6	561	31.1	167	32.8
2	92	25.6	437	24.2	114	22.4
3	46	12.8	222	12.3	60	11.8
4	22	6.1	123	6.8	21	4.1
5	17	4.7	56	3.1	17	3.3
6	5	1.4	24	1.3	8	1.6
7	1	0.3	3	0.2	4	0.8
8	0	0.0	5	0.3	0	0.0
9	0	0.0	1	0.1	2	0.4
10	1	0.3	0	0.0	0	0.0
Total	360	100.1	1803	100.0	509	100.0

Source: National Longitudinal Survey of Youth

Table 5a
Number of Spells of Training
During First 36 Months after School
by Type of Training

Number of Episodes	Apprenticeship N	Apprenticeship % of Sample	Company Train N	Company Train % of Sample	Others N	Others % of Sample
0	2650	99.2%	2563	95.9%	2315	86.6%
1	22	0.8%	99	3.7%	324	12.1%
2	0	0.0%	9	0.3%	31	1.2%
3	0	0.0%	1	0.0%	2	0.1%
Total	2672	100.0%	2672	99.9%	2672	100.0%

Source: National Longitudinal Survey of Youth

Table 5b
Number of Apprenticeships
During First 36 Months after School
by Graduation Status

Number of Episodes	H.S. Dropouts N	H.S. Dropouts % of Sample	H.S. Grads N	H.S. Grads % of Sample	College Grads N	College Grads % of Sample
0	357	99.2%	1786	99.1%	507	99.6%
1	3	0.8%	17	0.9%	2	0.4%
Total	360	100.0%	1803	100.0%	509	100.0%

Source: National Longitudinal Survey of Youth

Table 5c
Number of Distinct Periods of Company-Provided Training During First 36 Months after School by Graduation Status

Number of Episodes	H.S. Dropouts N	H.S. Dropouts % of Sample	H.S. Grads N	H.S. Grads % of Sample	College Grads N	College Grads % of Sample
0	357	99.2%	1744	96.7%	462	90.8%
1	3	0.8%	55	3.1%	41	8.1%
2	0	0.0%	4	0.2%	5	1.0%
3	0	0.0%	0	0.0%	1	0.2%
Total	360	100.0%	1803	100.0%	509	100.1%

Source: National Longitudinal Survey of Youth

Table 5d
Number of Distinct Periods of Other Training
During First 36 Months after School
by Graduation Status

Number of Episodes	H.S. Dropouts N	H.S. Dropouts % of Sample	H.S. Grads N	H.S. Grads % of Sample	College Grads N	College Grads % of Sample
0	335	93.1%	1507	83.6%	473	92.9%
1	24	6.7%	266	14.8%	34	6.7%
2	1	0.3%	28	1.6%	2	0.4%
3	0	0.0%	2	0.1%	0	0.0%
Total	360	100.1%	1803	100.1%	509	100.0%

Source: National Longitudinal Survey of Youth

Table 6
Years of Schooling Completed After First Leaving School

# Years	H.S. Dropouts	H.S. Grads	College Grads	Total
0	328	1372	264	1964
1	28	225	62	315
2	2	136	69	207
3	1	58	42	101
4	0	5	53	58
5	0	7	15	22
6	0	0	1	1
7	0	0	2	2
8	1	0	1	2

Source: National Longitudinal Survey of Youth

Table 7
Number of Months Between Leaving School and First Full-Time Job

# of Months	H.S. Dropouts N	H.S. Dropouts % of Sample	H.S. Grads N	H.S. Grads % of Sample	College Grads N	College Grads % of Sample	Total N	Total % of Sample
1--3	173	48.1	959	53.2	310	60.9	1442	54.0
4--6	58	16.1	275	15.2	107	21.0	440	16.4
7--9	36	10.0	198	11.0	32	6.3	266	10.0
10--12	35	9.7	144	8.0	28	5.5	207	7.7
13--15	32	8.9	110	6.1	16	3.1	158	5.9
16--18	13	3.6	75	4.2	10	2.0	98	3.7
19--21	13	3.6	37	2.1	5	1.0	55	2.1
22--24	0	0.0	5	0.3	1	0.2	6	0.2
Total	360	100.0	1803	100.1	509	100.0	2672	100.0

Source: National Longitudinal Survey of Youth

Table 8
OLS Regressions of (ln) 1992 Wage
by Educational Achievement

Exp. Variable	H.S. Dropouts		H.S. Grads		College Grads	
Intercept	1.4178	(5.883)	1.4274	(7.443)	1.6778	(3.750)
Hisp	.0325	(0.580)	.0467	(1.393)	.0935	(1.050)
Black	-.0654	(-0.976)	-.0884	(-2.723)	.0645	(0.875)
male	.3629	(6.417)	.1625	(6.546)	.1307	(2.548)
married	.0552	(1.121)	.0566	(2.269)	.0696	(1.294)
school	-.0024	(-0.102)	.0240	(1.534)	.0164	(0.597)
tenure	.0018	(4.024)	.0014	(6.755)	.0009	(1.830)
tenure^2	-.0000	(-2.764)	-.0000	(-3.824)	-.0000	(-1.432)
union	.2692	(4.114)	.2291	(7.298)	.1860	(2.267)
numfrs	-.0531	(-1.512)	-.0708	(-2.955)	-.1791	(-1.529)
otquit	.0328	(2.116)	.0206	(2.388)	-.0040	(-0.230)
fmquit	.0881	(1.312)	-.0593	(-1.578)	-.2267	(-2.114)
wks-appren	.0037	(0.734)	-.0051	(-2.450)	.0029	(0.413)
wks-cotran	.0127	(2.154)	-.0003	(-2.548)	.0002	(0.073)
wks-ottran	.0039	(0.895)	.0011	(0.666)	.0028	(0.392)
skldiff	-.0038	(-0.090)	.0087	(0.519)	-.0420	(-2.188)
job1mos	-.0004	(-0.097)	-.0049	(-2.047)	-.0017	(-0.278)
AFQT	.0037	(2.494)	.0033	(5.482)	.0057	(4.126)
N	343		1602		490	
R^2	.3044		2175		1280	

Source: National Longitudinal Survey of Youth

Description of independent variables: 1) *Hisp*, *Black*, *male*, *married*, and *union* are all dummy variables with the expected interpretation; *school* is number of years of school completed through the relevant year; *tenure* is the length, in weeks, of job tenure on the job where wage is the dep. variable; *numfrs* is the number of jobs fired from during first three years after school; *otquit* is number of jobs quit for non-family reasons during first three years after school; *fmquit* is the number of jobs quit for family reasons during first three years after school; *wks-appren* is the total number of weeks of apprenticeship training the worker received during first three years after school; *wks-cotran* is the total number of weeks of company training during the first three years after school; *wks-ottran* is the total number of weeks of other types of training during this period; *job1mos* is the number of months after leaving school before the first full-time job was found; *skldiff* is the difference between number of years of schooling completed in 1992 (or 1991, or 1990) and the number completed when the respondent had first left school; and *AFQT* is the score on the AFQT test administered to (virtually) all NLSY respondents in 1981.

Table 9
OLS Regressions of # of Unemployment Spells in 1992
by Educational Achievement

Exp. Variable	H.S. Dropouts		H.S. Graduates		College Graduates	
Intercept	.7066	(1.888)	.5390	(2.402)	.6369	(1.740)
Hisp	-.0506	(-0.579)	.0038	(0.096)	.0376	(0.516)
Black	.2097	(2.017)	.1143	(3.004)	-.1248	(-2.069)
male	-.0299	(-0.340)	-.0413	(-1.421)	-.1501	(-3.568)
married	-.2037	(-2.699)	-.0348	(-1.194)	-.0622	(-1.419)
school	-.0233	(-0.647)	-.0195	(-1.065)	-.0225	(-1.000)
union	.0049	(0.048)	-.1580	(-4.342)	-.0616	(-0.923)
numfrs	.0129	(0.237)	.0898	(3.210)	-.1078	(-1.124)
otquit	.0067	(0.279)	.0304	(3.031)	.0247	(1.749)
fmquit	.0308	(0.295)	.1167	(2.654)	-.0721	(-0.822)
wks-appren	-.0025	(-0.322)	.0014	(0.557)	-.0025	(-0.443)
wks-cotran	-.0025	(-0.267)	-.0001	(-0.415)	-.0004	(-0.200)
wks-ottran	-.0039	(-0.573)	-.0011	(-0.556)	-.0075	(-1.309)
skldiff	-.0312	(-0.471	.0424	(2.156)	.0046	(0.297)
job1mos	.0162	(2.428)	.0032	(1.123)	.0013	(0.267)
AFQT	-.0015	(-0.678)	-.0019	(-2.771)	.0002	(0.138)
N	343		1602		490	
R^2	.0802		.0569		.0592	

Source: National Longitudinal Survey of Youth

See Table 8 for variable definitions.

Table 10
OLS Regressions of Percentage of Weeks Unemployed in 1992 by Educational Achievement

Exp. Variable	H.S. Dropouts		H.S. Graduates		College Graduates	
Intercept	-.0107	(-0.091)	.0712	(1.234)	.2487	(3.427)
Hisp	-.0280	(-1.017)	-.0023	(-0.231)	-.0069	(-0.480)
Black	.0428	(1.295)	.0229	(2.357)	-.0399	(-3.334)
male	.0480	(1.747)	.0162	(2.186)	-.0090	(-1.081)
married	-.0542	(-2.273)	-.0121	(-1.625)	-.0225	(-2.605)
school	.0054	(0.476)	-.0015	(-0.320)	-.0089	(-2.005)
union	-.0129	(-0.407)	-.0224	(-2.415)	-.0071	(-0.539)
numfrs	.0219	(1.276)	.0277	(3.855)	-.0068	(-0.357)
otquit	.0073	(0.967)	-.0007	(-0.274)	.0028	(0.998)
fmquit	.0511	(1.571)	.0089	(0.783)	-.0149	(-0.853)
wks-appren	-.0014	(-0.558)	-.0004	(-0.707)	-.0004	(-0.327)
wks-cotran	-.0001	(-0.040)	-.0000	(-0.382)	-.0001	(-0.200)
wks-ottran	-.0013	(-0.610)	-.0006	(-1.133)	-.0010	(-0.876)
skldiff	-.0023	(-0.113)	.0075	(1.492)	.0010	(0.322)
job1mos	.0028	(1.347)	-.0004	(-0.506)	.0003	(0.333)
AFQT	-.0001	(-0.078)	-.0004	(-2.006)	-.0008	(-3.586)
N	332		1583		483	
R^2	.0685		.0346		.0769	

Source: National Longitudinal Survey of Youth

See Table 8 for variable definitions. The dependent variable is the percentage of weeks spent in unemployment between 1992 interview and the prvious interview.

Table 11
Determinants of Turnover Experiences

	Numfrs		Otquit		Fmquit	
Intercept	.5659	(6.128)	2.7446	(9.991)	.2443	(4.041)
Hispanic	-.0642	(-2.463)	-.0650	(-0.839)	.0112	(0.657)
Black	-.0324	(-1.282)	-.3062	(-4.069)	.0200	(1.207)
male	.0272	(1.415)	-.0676	(-1.184)	-.0920	(-7.327)
sklbreak	-.0241	(-2.666)	-.1328	(-4.940)	-.0120	(-2.026)
H.S. Grad	-.0933	(-2.662)	.1057	(1.014)	-.0198	(-0.862)
Coll. Grad	-.0416	(-1.126)	.1090	(0.991)	-.0057	(-0.235)
AFQT	-.0004	(-0.815)	.0050	(3.608)	-.0000	(-0.091)
prev. job	.0422	(2.191)	.6935	(12.117)	.0164	(1.301)
union36	-.0213	(-1.064)	.0475	(0.796)	.0377	(2.871)
married36	-.0297	(-1.241)	-.0828	(-1.164)	.1468	(9.374)
N	2666		2666		2666	
R^2	.0349		.0848		.0662	

Source: National Longitudinal Survey of Youth

Variable descriptions: *Numfrs* is the number of times fired during the first 36 months after leaving school. *Otquit* is the number of times quit for non-family reasons during the first 36 months after leaving school. *Fmquit* is the number of times quit for family reasons during the first 36 months after leaving school. *Sklbreak* is the number of years of schooling completed when the worker first left school; *HS Grad* is equal to 1 if the worker had completed between 12 and 15 years of schooling by 1992 and is equal to 0 otherwise; *Coll Grad* is equal to 1 if the worker had completed more than 15 years of schooling by 1992 and is equal to 0 otherwise; *prev. job* is equal to 1 if a worker started a job within the year before leaving school and is equal to 0 otherwise; *union36* is equal to 1 if the worker had had a union job at any time during the first 36 months after leaving school and is equal to 0 otherwise; *married36* is equal to 1 if the worker had been married at any time during the first 36 months after leaving school and is equal to 0 otherwise.

Table 12
Determinants of Time Elapsed Before Finding the First Full-Time Job

Intercept	10.0570	(10.487)
Hispanic	-.2241	(-0.828)
Black	.4510	(1.722)
male	-.9768	(-4.962)
sklbreak	-.3364	(-3.588)
H.S. Grad	.2278	(0.627)
Coll. Grad	.4212	(1.098)
AFQT	-.0208	(-4.336)
prev. job	.6900	(3.453)
milit1	5.2346	(4.446)
milit2	-3.1499	(-1.789)
milit3	-3.9832	(-1.794)
milit4	-.1039	(0.069)
N	2666	
R^2	.0544	

Source: National Longitudinal Survey of Youth

Variable descriptions: *Job1mos* is the number of months after leaving school before a worker found his/her first full-time job; *sklbreak* is the years of schooling completed when the worker first left school; *HS Grad* is equal to 1 if the worker had completed between 12 and 15 years of schooling by 1992 and is equal to 0 otherwise; *Coll Grad* is equal to 1 if the worker had completed more than 15 years of schooling by 1992 and is equal to 0 otherwise; *prev. job* is equal to 1 if a worker started a job within the year before leaving school and is equal to 0 otherwise; *milit1* is equal to 1 if the worker had entered the military within one month after leaving school (0 otherwise), *milit2* is equal to 1 if the worker had entered the military two months after leaving school (0 otherwise), etc.

Table 13
Determinants of Training

	Weeks of Apprenticeship Training		Weeks of Company Training		Weeks of Other Training	
Intercept	.6229	(0.630)	3.5945	(0.215)	1.6707	(1.185)
Hisp	.5341	(1.954)	-2.4350	(-0.522)	.1591	(0.408)
Black	.1804	(0.679)	-2.9369	(-0.649)	-.3291	(-0.868)
male	.5298	(2.614)	3.6228	(1.047)	-.2013	(-0.696)
sklbreak	-.0978	(-1.012)	.0206	(0.013)	-.0935	(-0.678)
HS Grad	.2896	(0.787)	3.1748	(0.511)	.8038	(1.532)
Coll Grad	-.0694	(-0.179)	-1.6959	(-0.257)	-1.0928	(-1.975)
numjobs	.0088	(0.177)	-1.1410	(-1.338)	-.0547	(-0.767)
AFQT	.0070	(1.444)	.0435	(0.519)	.0153	(2.206)
job1mos	-.0283	(-1.432)	-.2623	(-0.763)	-.0118	(-0.419)
union36	.3088	(1.468)	-2.9630	(-0.824)	.2770	(0.923)
married36	.1391	(0.554)	-1.4996	(-0.350)	-.5435	(-1.518)
N	2666		2429		2666	
R^2	.0074		.0023		.0081	

Source: National Longitudinal Survey of Youth

Variable descriptions: *Sklbreak* is the years of schooling completed when the worker first left school; *HS Grad* is equal to 1 if the worker had completed between 12 and 15 years of schooling by 1992 and is equal to 0 otherwise; *Coll Grad* is equal to 1 if the worker had completed more than 15 years of schooling by 1992 and is equal to 0 otherwise; *numjobs* is the total number of jobs a worker ever reported having as of the year he/she left school; *job1mos* is the number of months after leaving school before a worker found his/her first full-time job; *union36* is equal to 1 if the worker has had a union job at any time during the 36 months after leaving school and is equal to 0 otherwise; *married36* is equal to 1 if the worker had been married at any time during the 36 months after leaving school and is equal to 0 otherwise.

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